

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/025,454	CAVALLI ET AL.	
	Examiner	Art Unit	
	Curtis B. Odom	2634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt filed on 3/9/2006.
2. ☒ The allowed claim(s) is/are 12-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.  |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jason Rhodes on March 23, 2006

The application has been amended as follows:

Please replace the abstract with the following abstract:

The present invention relates to adaptive phy mode systems, in which the modulation type and the forward error correction, jointly called phy mode, depend on the addressed terminal. Specifically, the present invention defines a power control technique for the terminal stations that also commands the phy mode switching. In particular, the peripheral stations transmit with the several phy modes so that the signals are received at the master station making a given performance related parameter equal. Then a hysteresis is defined which regulates the phy mode switching, setting suitable power thresholds of the signal. To keep the received power close to the working point of the appropriate phy mode, the master station relies on the received power level together with information regarding the unused power, which is available in the peripheral station. Thus, interference is reduced, and link coverage and throughput are optimized.

Claim 12. **(Currently Amended)** Method to adaptively control the phy mode of the transmissions from a peripheral station to a master station in either a point-to-multipoint or point-to-point transmission system with automatic transmit power control, called ATPC, and comprising the steps of:

receiving, at the peripheral station, power control signaling messages from the master station and regulating the transmitted power;

receiving, at the peripheral station, phy mode switching messages from the master station and changing the phy mode of the transmission;

transmitting said power control signaling messages from the master station to keep the received power inside an ATPC range;

transmitting a phy mode switching message from the master station in case the received power level reaches either a lower or a higher switching threshold associated with each phy mode used by the peripheral station for its transmissions, in order to command switching from a less robust and more efficient phy mode to a more robust and less efficient phy mode, or vice versa, in a way to establish a hysteresis cycle between said switching thresholds;

transmitting said power control signaling messages from the master station in order to keep the received mean power substantially close to a reference received power level or working point predefined for each phy mode;

checking if the peripheral station has sufficient available transmission power in order to guarantee the transmission using said less robust phy mode with such a power level that allows the master station to receive the transmitted signal above the working point of said less robust phy mode; and

transmitting in case the check is affirmative a phy mode switching message towards a less robust and more efficient phy mode.

### **EXAMINER'S STATEMENTS OF REASONS FOR ALLOWANCE**

2. Claims 12-22 are allowable over prior art references because related references do not disclose receiving both power control messages and phy mode switching messages at a peripheral station (wherein phy mode is defined as a modulation scheme in the instant specification), wherein the phy mode switching message causes a change in the phy mode when a received power level reaches a threshold and the power control messages are transmitted to keep a received mean power substantially close to a reference power level defined for each phy mode. The method also checks whether the peripheral station has sufficient transmission power to guarantee the change in the phy mode.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dutta et al. (U. S. Patent No. 5, 982, 813) discloses varying a modulation scheme based on the characteristics of a communication channel.

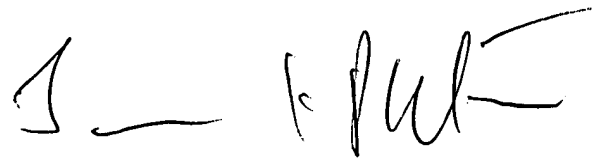
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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom  
March 23, 2006

A handwritten signature in black ink, appearing to read 'J. K. Patel', with a long horizontal stroke extending to the right.

**JAY K. PATEL**  
**SUPERVISORY PATENT EXAMINER**